

## THE IDENTITY AND STATUS OF THOMAS' "LECTOTYPE" OF *LEPORILLUS APICALIS* (GOULD, 1853) [RODENTIA: MURIDAE]

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### Summary

MAHONEY, J. A. (1975).—The identity and status of Thomas' "lectotype" of *Leporillus apicalis* (Gould, 1853) [Rodentia: Muridae]. *Trans. R. Soc. S. Aust.* **99**(3), 101-104, 30 August 1975.

The specimen selected by Thomas as the lectotype of *Leporillus apicalis* (Gould, 1853) was misidentified by him and belongs to *Leporillus conditor* (Sturt, 1848). It does not belong to the type series of *L. apicalis*, therefore Thomas' lectotype selection for that species is invalid. The type material of *L. apicalis* and *L. conditor* is missing. Thomas' "lectotype" of *L. apicalis* and a second specimen of *L. conditor* in the British Museum (Natural History) could belong to the type series of *L. conditor*. Evidence for the occurrence of *L. apicalis* in Tasmania is lacking.

### Introduction

The name *Hapalotis apicalis* was proposed by Gould (1853a) for a new species of rodent from Australia. He did not state in the original description if one or more specimens were being described nor did he give any locality. Later, Gould (1853b) stated that he possessed a single example procured by Mr Strange in South Australia, and he illustrated the external features.

Thomas (1906a) nominated *Hapalotis apicalis* as the type species of a new genus, *Leporillus*, and subsequently (Thomas 1921a) he selected British Museum (Natural History) specimen 1853.10.22.15<sup>1</sup> as the lectotype of *Leporillus apicalis*, describing it as a female from S. Australia. Explaining his lectotype selection, Thomas (1921c) stated that although Gould had in his collection two specimens of that species, he seems to have done his describing from only one of them (BM, 53.10.22.14 (sic)—*lapsus* for BM, 53.10.22.15)

—the worst of the two, young, and with an imperfect tail. Thomas concluded with the remark that probably from memory, and certainly wrongly, Gould stated that the species had a white-tipped tail, but his overlooked second specimen [adult with nearly perfect skull<sup>2</sup> and quite perfect tail (BM, 53.10.22.14)] has the latter organ uniformly blackish or brownish above and dull white below, and there is no indication of the white tail-tip found in so many Australasian Muridae.

A study of three Australian Museum specimens of *L. apicalis*, and the literature, enabled Troughton (1923) to confirm that Gould was correct in attributing a white tail-tip to the species. Troughton stated also that Thomas' remark that Gould seems to have done his describing from only one of his two specimens means that that specimen must be accepted as the holotype.

Tate (1951) treated specimens 1853.10.22.14 and 1853.10.22.15 as "cotypes" of *L. apicalis*

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<sup>1</sup> The first two digits of British Museum (Natural History) registration numbers of mammals are frequently omitted from publications. Thus Thomas uses 53.10.22.15 for 1853.10.22.15.

<sup>2</sup> This skull is registered as 1854.10.21.1 and the Register entry mentions a stuffed specimen and refers to 53.10.22.16. I have been unable to find a specimen numbered 1853.10.22.16 in the British Museum (N.H.) therefore I am following Thomas' conclusion that 1853.10.22.14, 1853.10.22.16 and 1854.10.21.1 belong to the one individual; but it is possible that 1853.10.22.14, identified as *Hapalotis apicalis* in the Register, is lost and the skin now numbered 1853.10.22.14 is skin 1853.10.22.16 with an incorrect number. A note in Thomas' handwriting attached to skin 1853.10.22.14 and stating that this specimen was considered to be the type seems to refer to the Museum Register where "type" has been written opposite the number 1853.10.22.16. A portion of the posterior half of the cranium, and the left mandibular ramus, are missing from the skull.

TABLE I

Skull measurements (in mm) of Thomas' "lectotype" of *Leporillus apicalis* (Gould), B.M. (N.H.), 1853.10.22.15.

Maximum width across nasals	5.0
Minimum width across right zygomatic plate	4.4
Length of right M <sup>1-3</sup>	9.7
Width of left M <sup>1</sup>	2.6
Width of left M <sup>2</sup>	2.7
Width of left M <sup>3</sup>	2.4
Length of left M <sub>1-3</sub>	9.1
Width of left M <sub>1</sub>	2.4
Width of left M <sub>2</sub>	2.7
Width of left M <sub>3</sub>	2.4

The teeth measurements are for the crowns of the teeth.

and referred to them as adult and young females, from "South Australia", collected by F. Strange. He briefly described the skin and skull of each and recorded measurements of them. He does not refer, in his account of *L. apicalis*, to Thomas' lectotype selection or to Troughton's recognition of a holotype for the species.

#### Identity of the "lectotype"

British Museum (N.H.) specimens 1853.10.22.14 and 1853.10.22.15 are examples of *Leporillus conditor* (Sturt, 1848) and not specimens of *Leporillus apicalis* (Gould, 1853) as believed by Thomas. They do not agree with the original description of *L. apicalis* (Gould) and because of this I do not accept that either of them belong to the type series of that species. Consequently, I regard as invalid Thomas' lectotype selection for *L. apicalis*. Thomas (1921b) stated there is no specimen of *L. conditor* in the British Museum, and further demonstrated his unfamiliarity with its characters by suggesting that it possibly belongs to *Notomys*, a genus of Australian hopping mice and rats.

Measurements of the badly damaged skull of Thomas' "lectotype" are given in Table I. The skull is illustrated in Figs 1-4.

#### Discussion

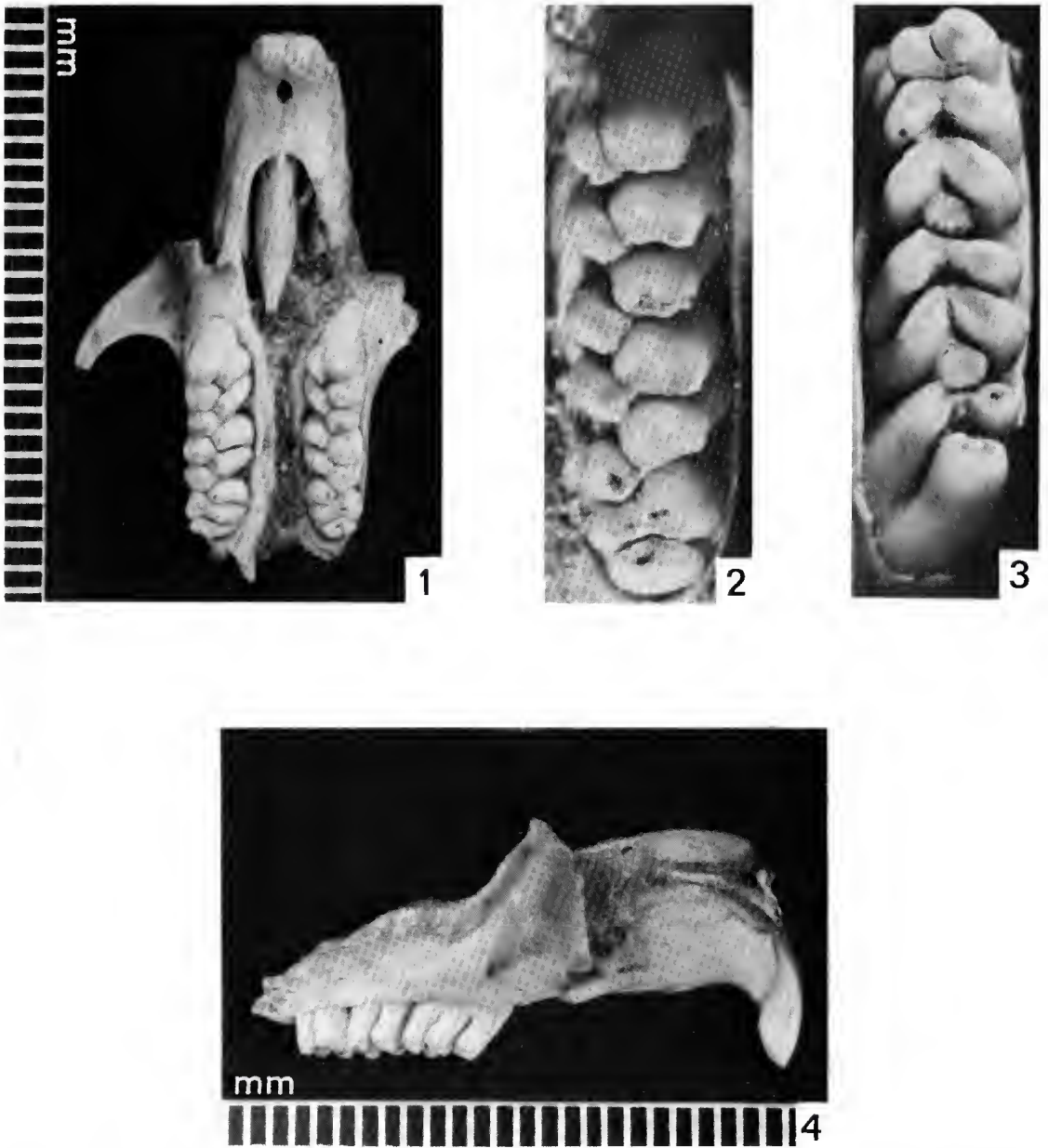
The type material of both *L. apicalis* and *L. conditor* is lost. The latter species was described by Sturt in 1848 as *Mus conditor* from specimens observed and collected on his

1844-6 Expedition to Central Australia. The original description was published in the Narrative of the Expedition and Sturt did not say where his material was deposited. It seems likely however that at least one specimen, illustrated by J. Gould and H. C. Richter in a plate<sup>3</sup> accompanying Sturt's description of the species, would have gone into Gould's collection, and perhaps from there into a Museum collection. A collection of mammals made by the Expedition was presented to the British Museum by Sturt in 1846. This collection is noted by Thomas (1906b) and does not contain specimens of *Leporillus*.

Specimens 1853.10.22.14 and 1853.10.22.15 were registered in the British Museum on October 22nd, 1853, and were acquired from Gould. Labels attached to them refer to S. Australia and F. Strange. The entries for them in the Register mention neither a locality nor Strange. S. Australia could be an abbreviation of either South Australia or Southern Australia and F. Strange presumably is Frederick Strange, a collector and dealer in natural history specimens who accompanied Sturt on some of his early surveys (but not the 1844-6 Expedition), and was an early settler in South Australia and later, in the 1840's, a resident of New South Wales (Whitell 1947). Gould (1849) does not mention Strange and South Australia in his account of *L. conditor*. Subsequently (Gould 1863) he gives only the interior of New South Wales and Victoria as localities for the species. It is possible that the inscriptions on the labels are interpretations of the origins of the two specimens based on Gould's account of *L. apicalis*. If they are not interpretations, their significance is uncertain since the citation of S. Australia is ambiguous and Strange might not be the collector of the specimens.

British Museum (N.H.) specimens 1853.10.22.14 and 1853.10.22.15 could have been collected on Sturt's 1844-6 Expedition and might belong to the type series of *L. conditor*. This is so even if they came from South Australia. Sturt (1848, Vol. 1, pp. 120-121) referred in his account of the Expedition's progress along the Darling River in New South Wales to an individual of *L. conditor* secured by Mr Browne and to one, a male, obtained by himself from a native. However, Sturt (Vol. 2, Appendix, p. 4) noted also that the last nest

<sup>3</sup> Gould's name is printed on this plate and the species name *Mus conditor* is attributed to him by Sturt; nevertheless Sturt is the author of the name *Mus conditor*.



Figs 1-4. *Leporillus conditor* (Sturt, 1848). British Museum (N.H.) 1853.10.22.15. Thomas' "lectotype" of *Leporillus apicalis* (Gould, 1853). Fig. 1—Ventral view of cranium (x3). Fig. 2—Occlusal view of left upper molar row (x8). Fig. 3—Occlusal view of left lower molar row (x8). Fig. 4—Right lateral view of cranium (x3).

of *L. conditor* was found on the bank of the muddy lagoon to the north of the Pine Forest (N.S.W.), and the Expedition explored portion of South Australia before reaching the muddy lagoon.

Although the whereabouts of the type material of *L. apicalis* and *L. conditor* is un-

known, there is no uncertainty about which species of native rodents were named *Hapalotis apicalis* and *Mus conditor* by Gould and Sturt respectively, and neotype selections for them are unwarranted.

Gould (1853b) commented in his account of *L. apicalis* that an animal in spirits in the

British Museum, presented by R. C. Gunn, from Van Diemen's Land, accords very closely with it in the colouring of the fur and in the rat-like form of the tail. He added that it is of much smaller size than *L. apicalis* and in all probability will prove to be a new species. Gould's listing in 1863 of Van Diemen's Land as a possible locality for *L. apicalis* could be based on that material. Tasmanian rodent specimens in the British Museum (N.H.) and attributable to Gunn are recorded in the Register. The identities of these specimens and their registration numbers are *Rattus rattus* (Linnaeus, 1758) (1837.6.10.56), *Rattus norvegicus* (Berkenhout, 1769) (1838.1.15.17),

*Rattus hurreolus* (Gray, 1841) (1845.5.2.3, 1852.1.15.16, 1852.1.15.17), *Mastacomys fuscus* Thomas, 1882 (1852.1.15.15) and *Pseudomys higginsi* (Trouessart, 1897) (1852.1.15.18). None of these are *L. apicalis*, and evidence for the occurrence of this species in Tasmania is lacking.

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